

ABSTRACT OF THE DISCLOSURE

An image sensor includes a two-dimensional array of photo sensitive pixels for collecting photo generated electron or hole charge packets; (b) a Bayer color filter arranged over the photo sensitive pixels in which the first color is over two pixels and the second and third are over one pixel each in a two by two sub-array of the Bayer color filter; (c) a parallel charge coupled device for transferring charge packets in parallel towards a serial charge coupled device that receives charge packets from the parallel column charge-coupled devices; and (d) a row of pixels between the photo sensitive pixels and the serial charge-coupled device for the purpose of delaying charge transfer of selected rows to offset one column of the Bayer filter pattern such that pixels of the first color become aligned in one row and pixels of the second and third colors become aligned in the following row.